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The Disvalue of 'Contingent Valuation' and the Problem of the 'Expectation Gap'

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ABSTRACT

'Contingent Valuation' is a method often used to make decisions about environmental issues. It is used to elicit citizens' preferences at the location of a specific facility, new road and the like. I argue that even if we could elicit a truly informed and 'free' choice, the method would remain flawed, as 1) all 'local' activity also has far-reaching environmental consequences; 2) majority decisions may support choices that adversely affect minorities; 3) even with full information, consenting to harms like significant alterations of our normal functioning or health, or genetic mutations, may not be morally acceptable.

KEYWORDS

Risk assessment methods, citizens' choices, global impacts, minority rights

INTRODUCTION

Risk assessment is the accepted basis for public policy decisions affecting communities exposed to environmental hazards, and much has been written on the various approaches to risk assessment (Shrader-Frechette, 1991). Here I shall discuss only a specific approach to risk assessment and to the protection of certain landscapes or other natural features, namely, the economic tool of 'contingent valuation'.

I will focus on the application of contingent valuation to questions that are of more than local significance. It can be argued that the siting of a car park in scenic areas or the routing of roads are of little or no significance except to the local communities where these facilities are to be located. I would not accept this argument too quickly. The siting of roads is in and of itself an environmental hazard, leading to possible losses of biodiversity and even to human health

impacts (Noss and Cooperrider, 1994; RIVM, 1986; Westra, 1998). Perhaps what is needed is a reversal of the accepted 'burden of proof' approach, so that the would-be developer should be asked to offer impartial, multi-source, multi-disciplinary evidence that the proposed change will not present a possible global hazard.

One should keep in mind also that with multi-source, or no-point pollution, it is not possible to know precisely which particular drop of toxic material is the one that renders the lake, river, or local air hazardous to health. In addition, given our present level of overdevelopment in North-west affluent countries, it is hard to pinpoint which particular road or parking lot will deal the final blow to the ecological integrity of an area, hence to the life-support services provided by that ecosystem.

RISK ASSESSMENT AND CONTINGENT VALUATION

What is the connection between risk assessment and contingent valuation? It is often the case that what must be assessed is not a present and obvious hazard, but a more distant threat of a slow acting environmental harm. For these risks, it is sometimes deemed to be necessary to arrive at a 'value' of various environmental areas and of the 'services' they provide for all life. Mark Sagoff explains the need, in these cases,

to measure the value individuals attach to environmental goods and services that markets fail to price. This effort, which often uses surveys to elicit individual willingness to pay (WTP) for public goods, is associated with the vast literature on contingent valuation methodology (CVM). (Sagoff, 1998)

'Contingent valuation' (CV) is based on the expressed preferences of citizens in a specific locale, and their 'willingness to pay' to avoid environmental hazards. Contingent valuation is praised as a useful tool for two main reasons: 1) by asking people to choose we can, it is said, discover their preferences, hence we can reach a truly democratic decision by incorporating the results into public policy; 2) in addition, we have a method that produces quantifiable results that can eventually be used to settle court cases in a tangible way.

Jack Knetsch (1994) traces the history of CV as a method from its first appearance in a thesis by Robert Davis (1963). He points out that, for a number of years, the CV method was not utilised, until its function in reaching settlements was understood:

... little serious use was made of the method until recent US legislation made people who are deemed responsible for environmental degradation – through oil spills and the like-financially liable for the value of environmental loss. (Knetsch, 1994: 357)

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The security provided by numbers must have been hard to resist. Not only does the method indicate the road to be followed to arrive at numbers, but the numbers are to be provided by the stakeholders themselves, as 'victims', or at least as potentially affected by the environmental hazard. Hence what is claimed on behalf of the method is not only a common denominator to use in settlement of compensation cases, but also a seemingly democratic tool to arrive at appropriate figures. After all, the valuation reached is based on people's preferences as expressed by the very group whose lives or health might receive the negative impacts for which compensation was sought. In practice, it is seldom the case that any compensation is actually awarded.

Despite the method's popularity and widespread acceptance the answers to several questions have not been forthcoming. One problem is an inherent weakness: 'willingness to pay' (WTP), despite the possible addition of communitarian values, is reached through discourse and debate among stakeholders (Sagoff, 1998). Certainly citizens at a location have the right to agree democratically to their joint willingness to bear risks or even to accept harms, if the countervailing benefits are sufficiently large. However, the difficulty from the standpoint of morality, both intraspecific and interspecies, is the scientific uncertainty and the lack of information available to stakeholders (Funtowicz and Ravetz, 1993; Brown, 1995, Westra, 1998). If we support the democratic right to self-determination, the consent required is based on two conditions, a) the freedom to choose, and b) full knowledge and understanding of what the choice might entail. The former (a) is not available in many cases, where the hazardous choice may be the only one that might preserve the earnings, hence the economic survival of those involved, e.g. a community dependent on one industry (Shrader-Frechette, 1991). The latter (b) is a condition that is almost never met, first, because of fundamental uncertainty and second because industries and other institutions have a vested interest in protecting and promoting their products and operations and often systematically and legally withhold vital information because of trade-secrets acts (Westra, 1998).

Hence the argument for the democratic right to self-determination cannot be supported as stated. In addition, the 'right' to allow oneself and one's families to be harmed is also questionable, even if the other two conditions are met: as, according to Kant, persons cannot morally harm themselves for profit, for instance by selling themselves into slavery or selling their organs (Westra, 1998). Moreover, and this is perhaps the greatest stumbling block to the use of CVs, the assumption that environmental harms are localised, so that if only locals are affected, they and they alone ought to have a voice in decisions about the acceptability of environmental risks, is also incorrect. Environmental degradation and disintegrity may cause global harms, so that not only will the risks exceed local boundaries, but those affected in far-flung areas may be less protected and more vulnerable to harms than the industrialised community from which the hazard originated (Westra, 1998). This point needs to be emphasised.

Mark Sagoff, for instance, argues that the corrective for the individualised economic concerns of individual citizens lies in the emphasis on the communitarian/national values that they share with their neighbours and which may emerge through dialogue or be reinforced through community meetings and interaction (Sagoff, 1998). While this projected interaction among citizens might help to transform 'gratification' or 'consumers' values' into 'citizens' values' (Sagoff, 1998), even that desirable result remains insufficient. More input is needed from a universal point of view, in the face of today's global threats and in the presence of international interests (Westra, 1998).

In short, although the move from consumer to stakeholder interests is necessary for public policy, it is not sufficient for a morally defensible position. Difficulties that still remain are: 1) the problem of minority stakeholders (Westra and Wenz, 1995; Westra, 1998); 2) the problem of 'culturally relative', place-based values (Shrader-Frechette, 1991) that are inappropriate to confront global problems (hence, *in principle* stakeholder/citizens' values are problematic, even when they are present in CV, as determinant of a defensible environmental public policy); 3) the presence of manipulated or hidden information (Korten, 1995); and 4) a fundamental problem similar to what accountants call the 'expectation gap'. Underlying these problems there are three major sets of difficulties that will also emerge as the four points are discussed. These are 'the problems faced by any system of democratic decision making; the problems also acknowledged by CV practitioners; and problems which cannot be addressed within the theoretical base of CV and which, if accepted, in effect demolish it as a practical tool' (Prior, 1998). Before turning to the specific issues listed above, it may be best to say something about these basic problems.

First, one might ask whether the problems imputed to the method of CV are not simply the problems of democratic decision-making, as it is practised in North-west affluent countries (Westra, 1998). The answer is that while this is true, problems such as the lack of freely available information, become more acute within the context of CV. If preferences and choices are viewed as determinant, and even the possibility of a legal or scientific counter-force is eliminated at the start, then the problems present in liberal democracies are exacerbated. Therefore the problems are not unique in CV, but through the use of CV the problems common to liberal democracies are magnified.

What about the problems acknowledged by CV theorists? Two major issues fit within this category. One is the necessity for a global perspective, the other, the importance of the *size* and the *location* of the population that is sampled. It is both short-sighted and unscientific to assume that *any* intrusive siting of unsafe facilities, or even opening of roads, have effects that can be *credibly* limited to *one* area, and *one* community. And if that is true, then those outside the community have a stake in the decision to be made. If one envisions a series of such decisions being billed as 'limited to specific communities' all over the world, one might bring to mind the issue of fisheries in North America and

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especially Canada, and the impact of these often local decisions on other countries, such as Spain, Portugal and Norway. Decisions were made repeatedly as 'local', but the ultimate consequence was the collapse of one fishery stock after another: these were clearly global consequences of local decisions.

Such consequences take us beyond the theoretical limitations of CV. Take the familiar example of the Bhopal tragedy after the siting of the Union Carbide facility in India. Were the local citizens aware of the hazard in their midst? The answer is clearly, no. Had they been questioned about the desirability of such a siting, would they have rejected it? The answer once again is, probably not. The question that must be answered then is, what is the morally right approach that should have been taken? Possible alternatives might include more available, open information from hazardous corporate activities planners, on which communities might base their choices and decisions. But it should also include first removing the desperate economic pressures that effectively force many poverty stricken communities to 'choose' any alternative that will provide them with economic survival. Offering these populations a hazardous, risky option as the only one other than starvation, is immoral in itself. The corporation is gravely wrong in offering, and the impoverished may also be wrong in accepting it, although clearly the former bears the greater guilt.

Kristin Shrader-Frechette discusses the 'isolationist strategy' often employed by multinationals leary of exposing their own nationals to the risk to which they willingly expose those in developing countries through technology transfers such as banned pesticides:

The argument is that a bloody loaf of bread is sometimes better than no loaf at all, that a dangerous job is preferable to no job, and that food riddled with banned pesticides is better than no food at all. (Shrader-Frechette, 1991)

The position presupposes that 'any cost is allowable as long as the countervailing benefits are greater' (Shrader-Frechette, 1991). One might ask whether there is any point in criticising CV as a method, when the critique glosses over such large, unanswered issues that cannot be addressed from within the theoretical base of CV. I think that there is. The reason is that the method serves to lend a spurious air of respectability and legitimacy to practices that are deeply flawed from the moral point of view. So long as the systems that support Union Carbide remain institutionalised, and no serious questions are asked about the operation of all 'risky business' (Draper, 1991), it is both harmful and superficial to propose a method that attempts to lend these practices a glossy and misleading coat of apparent legitimacy. This paper does not attempt to deal with all the grave, institutionalised underlying problems in democratic decision-making. It only proposes an examination of CV with the specific purpose of showing why the mantle of respectability the method assumes is only apparent, and thus masks the other, deeper problems that should be brought out in the open. We can return now to the specific questions raised by CV methodology.

HUMAN RIGHTS AND TWO PROBLEMS IN CONTINGENT VALUATIONS

The first difficulty is the one I termed the problem of minority stakeholders. Even when we determine the preferences, even the considered preferences of a community, we are usually committed only to 'hearing' opposing opinions and choices as these will not be adopted unless they happen to be those of the majority as well. Yet, even if we limit our concern to human life and health risks, minority stakeholders tend to be those who are the most adversely affected by environmental hazards. For this reason:

Grassroots environmental justice groups and their networks must become full partners, not silent or junior partners in planning the implementation of the new executive order [of environmental justice]. (Bullard, 1995: 11)

It is minorities who live in 'brownfields', that is, in areas that have been used for environmentally unsafe operations and industries for years, and are, even now, considered to be a better choice for such uses, whatever the possible health costs to the minority inhabitants. LULUs ('locally unwanted land use' sites) chosen by majorities and imposed upon minorities are commonplace throughout North America, and are a fact of life in developing countries. Trade in toxic wastes thrives between the affluent North-west and the vulnerable, impoverished South-east (Bullard, 1995: 6; Shrader-Frechette, 1991; Cranor, 1993). Similarly, there is substantial evidence of 'unequal protection' and the prevalence of documented 'environmental racism' from the 'layers of poison in Altgeld Gardens' (a community in Chicago), to the overwhelming air pollution problems in the Los Angeles air basin, where '71 percent of African Americans and 50 percent Latinos live in areas with the most polluted air' (Bullard, 1995: 7). In all these cases we can see first hand the result of majoritarian community decisions about environmental risks.

Risks are viewed, and valued, by the majority in quite different ways whether it is 'our' (majority) people or 'others' who might be affected. Geographical equity and equal protection (US) or the equal 'security of persons' (Canadian), cannot be based on the implementation of majority preferences, even when these valuations are elicited *after* community dialogue. Were that the case, no dumping would occur or have occurred in African-American or other minority neighbourhood throughout the US (Westra and Wenz, 1995).

The second problem – the 'culturally relative', place-based values – arises because of the difficulty inherent in basing risk assessments on the preferences of *one* community, when the effects of these hazards are potentially global instead. That is the major tenet of the 'ethics of integrity' (Westra, 1998). According to that perspective, the only sound basis for assessing environmental hazards, is to examine their impact on natural life-support systems. Hence this difficulty does not hinge on the composition of the majority and the presence of

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minority stakeholders within the community, but on the presence of *global* stakeholders beyond the community, who represent a majority that is neither seen, considered, nor heard. Local preferences and local valuations will tend to reflect the culture and the location wherein they arise. But risk assessment based on cultural relativism – that is, risk understood as a 'social construct' – has been found to be flawed within the extensive literature on the topic. For instance, Kristin Shrader-Frechette says:

But even though risk evaluation is not wholly objective, neither is it *merely* evaluative nor only a construct. Constructs don't kill people, faulty reactors, improperly stored toxics and poor risk evaluations do. (Shrader-Frechette, 1991: 30)

The problem with culturally relative preferences is both theoretical, given the indefensibility of ethical relativism as a moral theory, but also practical and scientific. There is ultimately no environmental hazard that can be contained at a location. Climate conditions, non-point pollution, the vagaries of the weather and the difficulties of preventing leaching conspire to render all hazards global, at least potentially. Moreover, the practices of 'risky business' (Draper, 1991) and the emergence of diseases and health threats from both products and practices, especially in combination with climate change (McMichael, 1995; Baskin, 1997; Pimentel et al., 1998; Westra, 1998) demonstrate clearly the inappropriateness of place/community based preferences as a determining indicator for public decision-making.

Thus the problem of 'culturally relative' and place-based values, includes three separate issues: a) the inappropriate presence of cultural relativism as an assumption; b) the conflict between present, local interests and global needs; and c) the lack of a non-anthropocentric, life-based perspective. The question is no longer just one of 'majority rule', as outlined in the discussion of the previous problem, but the missing universal, global perspective required. In some cases, local perspective and needs should prevail, hence the argument is not that a global perspective *must* prevail in all cases, but that the global interests and those of life-support systems and non-human nature must be considered in each case. These perspectives cannot be captured through the method of CV. An example of a local argument that ought to prevail, is that of the diet choices of Inuit people. Although it is morally preferable on ecological grounds as well as on the grounds of fairness and global justice, to adopt a vegetarian diet, or at least for most of us to eat lower on the food chain, this argument cannot apply to areas where these choices are not available.

Health problems, both disease and increased mortality, are causally related to hazardous products and practices: these are routinely produced or practised at some specific locale. For instance, the Bhopal tragedy was the result in India, of management decisions taken in North America about the manufacture and sale of pesticides. The citizens of Bhopal had no information, no debate of experts,

scientists and ethicists upon which to base a preference that was never elicited from them. This is not an isolated occurrence, as most other hazardous products and activities are never scientifically evaluated for their effects from global use or for other global consequences. In addition, North-west citizens living at the location where the original plant or industrial operation is located may derive some economic benefit from the risky production. In contrast, labourers and users elsewhere, in locations characterised by the absence of appropriate environmental regulations, enjoy minimal benefits, while they are forced to carry a much heavier burden. It might be said that many of the questions whose answers are to be sought by the method of contingent valuation *appear* to be primarily or exclusively local questions. I have responded to this objection earlier in this article. But it is worth reiterating that 'it is only one straw', is not a sound criticism of the proverbial 'straw' that broke the camel's back. It is easier to see why 'it is only a local issue' is problematic when one considers an ecosystem such as that of the Great Lakes, for instance. Even if each contributing polluter remains within the legal, 'safe' margin for a specific emission, the cumulative and synergistic effects render the *whole* aggregate of emissions unacceptable from the standpoint of human safety and from that of environmental protection.

Hence one may accept the primacy of protecting life-support systems and take a non-anthropocentric perspective for a more effective approach to this important problem. Conversely, one may even remain within anthropocentrism and appeal to the human rights to 'security of persons' (Canadian Charter of Rights), or to 'equal protection' (US Constitutional Amendments no. 5 and 14). In either case, rubber stamping a decision that would maintain or worsen the status quo, because it is chosen by CV methodology, would be a travesty not only of ethics, both human and environmental, but also of justice.

Justice requires that benefits and burdens be shared fairly. Contingent valuation, even when modified by community debate, remains far too biased, uninformed and parochial to provide an appropriate and secure basis for a just and objective risk assessment. The problem becomes even more acute when the rest of the 'stakeholders' present and future, include non-human animals and natural systems. In his recent work, *Justice for Here and Now* (1998), James Sterba proposes three principles for non-anthropocentric justice: 1) 'A Principle of Human Defense', 2) 'A Principle of Human Preservation', and 3) 'A Principle of Disproportionality'. The first two pose clear limits to the sort of aggression that is permissible on the part of humans, toward non-human animals, 'plants and even whole species and ecosystems'. The last principle separates basic from non-basic or 'luxury' needs of human, so that only the former, but not the latter permit aggression against individuals or wholes in the non-human world (Sterba, 1998: 148).

I have shown elsewhere that even well-informed, well-motivated community-based decisions such as those that influenced fishery policy decisions in

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Eastern Canada in 1994 and again in 1996, resulted in irreparable harm to the natural resource (fishery for cod and turbot) and the total loss of economic benefits and community life for the affected fishermen (Westra, 1998). Once again, the harm perpetrated was global, the misguided decisions that led to it, community/preference based instead. Therefore it is clear that environmental considerations are hard to integrate within preference-based risk assessments, unless the risk in question is limited in both time and place, something that is hard to find when environmental risks are considered.

In conclusion, the local/global problem and the minority/majority problems are not well addressed in the context of preference-based environmental decision-making. These difficulties are substantially magnified when non-human animals, individuals and wholes are introduced into the argument, as anthropocentrism is not the only approach when environmental risks are at stake. The ecosystem approach includes natural systems with all their biotic and abiotic components (Westra, 1994), not only because of the intrinsic value of these components and of the natural processes they engender in their own support, but also for the life-support provided by 'nature's services' to all living things, including humans (Daily, 1997; Westra, 1998).

Non-anthropocentrism goes beyond human preferences, not to indicate that human have no value compared to other species, but to emphasise the commonality among all natural systems, and the dependence of all parts, biotic and abiotic on the processes within the whole of their habitat. Hence, a position that gives primacy to natural wholes is at the same time, also a position that protects and supports humans, at least in their basic (as opposed to their 'luxury') needs (Sterba, 1998; Westra, 1998). From this perspective, and from the perspective of the 'ethics of integrity', (Westra, 1998), local human preferences and the 'valuations' they might engender provide an incomplete and misleading standpoint for risk assessment and for the resulting public policies, as they provide no objective evidence to effect decisions that are safe, correct and morally defensible.

HUMAN RIGHTS AND THE QUESTION OF THE ACCOUNTING 'EXPECTATION GAP'

We have delayed the question of manipulated or hidden information in order to address that question in conjunction with the problem of the accounting 'expectation gap'. Democratic choices are intended to be based on information sufficient to allow for true consent, especially if some of the activities or products under consideration are hazardous. But the citizens of North-west affluent countries are seldom given enough information to be able to give free, informed consent. Ostensibly possessed of civil rights, basic education, access to information, and various constitutional and political guarantees about freedom of

choices, the right to life and the pursuit of happiness they are in fact manipulated to contribute willingly (but unknowingly) to their own plight. Aggressive advertising and marketing techniques cause the public to regard the products of modern technology as not only extremely desirable but even 'necessary'. Consumers regard these choices as 'free', while corporate sponsors employ 'trade secret' and other hard-won rules and regulations to protect themselves, and keep citizens in the dark about the consequences of their choices.

At the same time, public relations departments work steadily so that questions about the risks and harms imposed, and whether they are offset by the so-called benefits available, are raised as rarely as possible. Further, as David Korten shows, two other severe problems arise in connection with the pursuit of economic gain through techno-corporate activities. The first is a clear attack on democracy, as independent PR firms are hired at great cost to generate 'public movements' and campaigns, with the double aim of selling their ideas and preparing the public to accept and actively pursue certain products and services. The second problem is that businesses seek legislative modifications, regulations, or deregulations favourable to their interests. In some cases, corporations select and buy legislatures through campaign financing.

The result of these activities is that 'free democratic choices' are neither truly free nor truly democratic. Korten cites Washington journalist William Greider:

[the corporations'] tremendous financial resources, the diversity of their interests, the squads of talented professionals – all these assets and some others – are now relentlessly focused on the politics of governing. This new institutional reality is the centerpiece in the breakdown of contemporary democracy. Corporations exist to pursue their own profit maximisation, not the collective aspirations of the Society. (Korten, 1995: 67)

The problem is embedded in democracy in two senses: First corporations, as fictitious legal 'persons', are free to pursue their aims, unless it can be legally proven that citizens are directly harmed by their activities. Further, there is no overarching conception of 'the good' for all that can be contrasted with the corporations' perception of the good, which is economic rather than intellectual or spiritual. Moreover, because there is no 'good' to guide public policy, aside from aggregate choices and preferences, and because the public can be and in fact often is routinely manipulated and under-informed, the myth of 'one person, one vote' remains a vague ideal, not a reality.

The arguments often proposed to justify these negative effects centre on the alleged 'economic advantages' provided by multinational corporate giants. But, this 'economic advantage' is not evenly distributed or fairly apportioned among rich and poor: moreover, if we shift to the global scene even economic advances depend on relative rather than on absolute income. The Brundtland commission proposed an annual '3 per cent global increase in per capita income' that would translate into a first-year per capita increase (in US dollars) of \$633 for the United

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States and \$3.60 for Ethiopia. After ten years, the respective figures would be \$7,257 for the United States and \$41 for Ethiopia: a vast advantage for the 'haves' over the 'have-nots'. Korten adds, 'This advantage becomes a life-and-death issue in a resource-scarce world in which the rich and the poor are locked in mortal competition for a depleting resource base' (Korten, 1995: 48).

Objections may be raised about such polarised descriptions of corporate activities. For instance, David Crocker believes that 'demonising' corporations as such is philosophically fallacious and practically incorrect, as many corporations do seek to support and implement the common good in their activities. This objection, however, is open to a counter-objection. The main point at issue is not that this or that corporation is 'bad' and needs to be stopped, but that Western democracies and their institutions appear to have no mechanism available now, to protect the public from hazards and harms, many of which are in part self-inflicted under conditions of public misinformation and manipulation.

In this case, to say that there is no need to institute radical changes, or to press criminal charges against the corporations is, as I will argue, like saying that because many of us are generally decent people who do not view physical assault and murder as acceptable actions, there is no need for strong legal sanctions against these crimes. Leaving to the corporate goodwill of individual firms the choice to either engage in harmful activities or not, within the ambit of the present loose regulatory structures and unrealistic legal criteria, is tacitly to support the status quo and condone the crimes perpetrated thereby.

In addition, I have argued that even under conditions of full information, consent to harm oneself is not necessarily defensible from a moral point of view. From a moral (Kantian) point of view, we can argue against consent to harm, as long as harm is understood in the physical sense, not simply in the sense of being wronged, or not getting one's due. But the claim that, embracing the lifestyle of affluent North-western countries somehow entails giving 'tacit consent' to the bad consequences that accompany that way of life needs to be examined from the standpoint of political theory as well. Tacit consent, in the context of political obligation to government institutions, may not be assumed simply because we are silent, or because we do not protest, particularly because tacit consent is almost never informed consent, as neither effort nor expense is spared to ensure that the public is not informed, when this is in the interest of corporate power (one example is the addictive nature of tobacco).

Moreover, there are certain things to which we cannot consent in our social and political life. Enslavement is a clear example. Humans are created free and only acquire the obligations of a nation's citizen through (explicit) consent. But, although consent is a powerful tool in general, its power does not extend to relinquishing one's 'inalienable' rights, such as the right to life or to freedom itself; the right to self-defence cannot be abdicated. Hobbes says, 'A man cannot lay down the right of resisting them that assault him by force to take away his life' (Hobbes, 1958).

Simmons says that Kant argues for a similar position as well:

Kant holds that ‘no contract could put a man into the class of domestic animals which we use at will for any kind of service’; that is because ‘every man has inalienable rights which he cannot give up even if he would’ (Simmons, 1979: 67; Kant, 1965).

Kant holds human life to have infinite value, and he believes that humans cannot affect (or permit others to affect) their physical integrity for any advantage or any other consideration. Hence it may be argued that the human rights that represent and support these inalienable human goods, such as life, freedom, and physical integrity, cannot be transferred or set aside, even if *explicit* consent were present. In this case there is a solid historical and theoretical basis for the somewhat novel position I am advancing in support of criminalising those activities that represent an attack on our physical being.

To be sure, it is permissible and not immoral to trade-off some of our freedom, in exchange for wages, provided we consent and that respect for our humanity is present in the transaction, or for a great common ideal (say, the defence of our common freedom from enslavement), or to engage in warfare in our own country’s defence. Not all cases are so clear-cut that they evidently fall in either one camp (of permissible activities) or the other (of activities that represent an immoral trade-off); indeed, some, or perhaps even all workplace activities normally entail at least some risk of harm. Even a philosophy professor who must drive her car or walk to her teaching institution exposes herself to some risk of traffic mishaps. If she were to remain at home and teach from her house, those risks would be avoided. But inactivity and a sedentary lifestyle are at least as hazardous to one’s health.

In contrast, the public health threats considered here, whether directly posed by environmental conditions or indirectly caused by circumstances due to environmental disintegrity and degradation are the sort of severe threats epidemiologists document (McMichael, 1995); they are not the occasional or possible chance happenings one may encounter in the circumstances outlined in the previous paragraph. The health threats I have in mind are of three kinds:

1. Health threats that seriously impair our natural capabilities (e.g., changes in our normal reproductive, intellectual, emotional, or immune systems).
2. Health threats that pose an imminent danger of death to individuals or groups.
3. Health threats including long-term, delayed, and mutagenic effects; like the reproductive effects in (1), there are threats to our *species*, as well as to the affected individuals.

Of course, it is one thing to talk of morally right choices, quite another to believe that all people will always choose that which is morally right. Paul Thompson says:

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...although people have many values that affect their preferences, it may be that money is an adequate substitute for other values whenever there is some amount of money that a person would take for the good in question. It is plausible to believe that, despite protests to the contrary, love, pride, health, and even life itself will be forgone when the price gets too high. (Thompson, 1995: 97)

One may thus argue that people may pursue their economic interest rather than morally right choices, and that if that is their preference, it is their right to do so. But we cannot also argue that to pursue *aggregate* economic preferences is morally right, when the results of our choices may harm the 'pride, health, and even life itself' of those who did not make the same choice, elsewhere. CVs are intended to be a tool for public policy, as such their goal must be the public good, objectively understood, not just consent, even if consent could be sought from those who are far removed geographically and culturally from the site at issue. Thompson says:

The fact that many in government agencies do not understand rights or consent arguments is a serious matter, and the widespread use of economic policy models must be held partly responsible. (Thompson, 1995: 104)

He adds:

...the assumption that all social goals are determined by existing consumer preferences permits the inference that allocative efficiency approximates a totalization of independent, autonomous, personal preferences into a comprehensive social goal. However, one should not assume without argument that totaling individual preferences is an adequate, much less ideal, approach to social ethics. (Thompson, 1995: 111)

But beyond the issue of lack of consent and information embedded in the CV approach to risk assessment, there is an additional focal problem: scientific objectivity is missing, as it is often not even part of the process that is followed when a culturally relative approach is chosen (Shrader-Frechette, 1991).

It will be useful and instructive to turn now to a different kind of professional practice that is necessarily and legitimately based on figures and economic factors in general, that is the accounting profession. Since 1992, the 'Chief Executives of the Big Six (accounting) Firms' have been pursuing thorough revisions of the standards and practices of the profession, 'in the public interest' (Sommer, 1993). The association (AICPA) debated the impact of several problems connected with the legal strategies within the profession, but their main focus was the 'larger problem ... confronting the accounting profession', that is, the increasing 'expectation gap', with a corresponding decrease in the 'public's confidence'. In 1978 a Commission on Auditors' Responsibilities was the first to identify an 'expectation gap' between what the public expected to learn from accountants' work, and what accountants were actually producing. In essence, the public expects the information they receive from accounting

statements to be factually accurate, objective and truthful. That is, the figures listed in them preclude the presence of fraud. They want the statements to present only figures that accurately and clearly portray the true situation of the company whose reports they are. The commission as a whole emphasised the areas they believed needed special attention in order to eliminate or substantially reduce the 'gap'. Primary among these was an increased awareness of the possibility of fraud; in addition a renewed emphasis was recommended on 'the mandate of scepticism'.

A. Sommers, Jr. says, 'Auditors do become too comfortable with a client, too trusting, or too impressed with client iterations of integrity ...' (1993: 12). In essence then, the Board's recommendations exhort accountants *not* to listen to those who express opinions about matters on which the accountants must report, but to strive to maintain their distance and seek out factual economic information *aside* from the expressed beliefs of those with any connection with the firms on which they must report. It is interesting to note that auditors are also required 'to be more insistent that clients make appropriate disclosure with regard to risks and uncertainties attending their business' (Sommer, 1993: 16). Finally the Board also recommends that there should be a disclaimer in addition to those routinely affixed financial statements, to remind users that not all data reported on financial statements have 'the same degree of certainty' (Sommer, 1993: 17).

A Canadian report (Dalglish, 1994: 24) adds that the professional accountant must be willing 'to deliver' the information the public demands. The audit must provide 'reliability and credibility', while emphasising the presence of 'risks and uncertainties' (Dalglish, 1994: 25). What can be learned from these accounting concerns? The first point to note is that accounting records may 'harm' the public only in the sense of being misleading or being conducive to poor economic choices: they cannot be physically harmful. Yet despite the clear limits to the 'harms' they might impose, professional accountants identify professional behaviour with seeking out true, factual information, in order to meet their users' legitimate expectations. The figures accounting reports present are never based on eliciting opinion from stakeholders: an auditor who would pursue such a course would quickly lose his credibility and even his professional licence.

The second point that emerges is the clear recognition of the public's right to know the objective, true conditions of the operation with which they are concerned. This right is quite apart and different from the 'right' of the public to express their own opinions about those conditions and that operation. One cannot collapse the right to have true information together with the right to free speech and the right to express one's preferences and opinions. In the professional practice of accountancy, the acknowledgement of the 'expectation gap' is the major problem that confronts the profession; it establishes a clear precedent on priorities even in a field where no life-threatening events hang in the balance.

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Contingent valuations were sought in order to produce figures, numbers that might be used in legal cases where redress was sought for environmental damage, and that only in some cases. The legal implications of specific uses of financial statements and the information they convey are always a major concern for professional accountants, as they must acknowledge their ultimate responsibility. In contrast, if CVs were to produce a favourable assessment of an ultimately hazardous situation or product, one could not hold the 'preference counters' accountable, as they simply undertake to report what was told to them, not on the facts of the case, independently and objectively researched.

Thus the public interest is under attack in two ways from this perspective; first, because the public's right to know (the truth about a situation to the best of science's admittedly less than exact capacity to explain and predict) is not well-served; second, because if harm ensues, there is no professional authority who is responsible for the ultimate outcome.

A parallel case might be constructed: a person, ill with a hard-to-diagnose ailment, who decided to ask fellow citizens for their considered opinion about his case. The result of this consultation would be wrong in two ways: the lack of factual knowledge and the appropriate objective tests to effect a diagnosis about the condition; and the lack of a party responsible to the patient in case of continuing symptoms or aggravating condition because of misdiagnosis. In a recent paper, 'Sustainability: Ecological and Economic Perspectives', Bryan Norton and Michael Tolman address problems in 'ecological and economic theory'. That must be addressed, we are told, from a 'unified and interdisciplinary approach to decision making' (Norton and Tolman, 1997: 553). There are many problems in this paper, starting from the representation of ecologists' concern as the 'need to protect essential ecosystem processes in order to *protect important social values*' (Norton and Tolman, 1997: 554, my italics). While this might be correct in some cases, this position cannot be generalised as ecologists, for the most part, are concerned with the systems themselves, and the survival of all species and the continuance of all processes within those systems. Which of those species and processes are particularly relevant to 'social values' remains to be shown. Nevertheless Norton and Tolman also affirm that 'no generation should destabilise the ecosystem functions that underlie and provide the context for all human activity' (Norton and Tolman, 1997: 558). The question then is whether and how contingent valuation contributes to this laudable goal. Norton and Tolman devote a section of their paper to 'the problem of environmental accounting', that is, the problem of how to assign values, and what specific values, 'however measured' (p. 559) to environmental degradation or protection. Their argument is that neither ecology, nor economics nor philosophy can provide a complete and coherent understanding of human values (p. 560). After acknowledging different approaches in ethics (teleology, deontology and contractarianism are named), they propose an 'integrated pluralism' as solution,

as a pluralistic system of decision making, which makes any and all rules dependent entirely on context.

This approach may preclude arbitrariness, but it remains a clear example of 'cultural' or ethical relativism. It is defined as an approach that 'can logically comprehend the cost-benefit approach of welfare economics as well as other options, and encourage public discussion of what criteria to apply in sustainability calculations and measures' (Norton and Tolman, 1997: 562). But listening to perspectives and encouraging dialogue is similar to the strategy employed by the chemical industry, for instance, as it pacifies the public with community meetings and their declaration of sincere and pluralistic concerns, while continuing its hazardous operations just as before.

In these cases, a pluralistic dialogue ensues, without clear rules and priority ranking of concerns to direct it. What is changed is the *form* of interaction between the hazardous business and its stakeholders, while the risk *content* remains, for the most part, unabated. Unfortunately, that also appears to be the case for the outwardly benign approach of contingent valuation, as that tool leaves the presence of harms and hazards unaddressed. In addition to the many other problems, some of which have already been addressed in the literature, I believe that additional considerations introduced by the practice of professional accountants and the question of the 'expectation gap', introduce yet another perspective from which to evaluate contingent valuations from a moral standpoint. Thus CV, a subspecies of 'willingness to pay', is riddled with problems that cannot even be corrected through community dialogue, and by invoking 'citizens' values'. Although the accountants' 'expectations gap' problem is not precisely analogous, it evokes a dimension of the public interest that is also left out by the use of the method of contingent valuation.

A recent article by Michael Prior discusses 'Economic Valuation and Environmental Values' (Prior, 1998). He notes that many environmental philosophers who work with economists, adopt

[a] subjective preference-based theory exemplified by Dewey's aphorism that 'There is no value except where there is satisfaction'. (Prior, 1998: 436)

This position, Prior adds, is explicitly supported in the work of Bryan Norton. But cost-benefit analyses as well as willingness-to-pay and contingent valuation methods fail because the very assumptions, concepts and 'systematic language' employed in these methodologies are not shared by everyone in society. For instance, questionnaires that are used by respondents to reject the very idea of expressing in economic terms a 'valuation' of nature, will appear 'incomplete' or 'wrongly completed' and will be discarded thus falsifying the results sought and effectively eliminating dissent (Prior, 1998: 435). Prior also raises a question about Environmental Assessments (EA), which he deems preferable to CBAs: whether these, even 'using all the appropriate tools of consultation ... and, ultimately, a democratic form of decision-making ... could ever measure up

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to Sagoff's requirements' (Prior, 1998: 437). This seems unlikely, and also insufficient even if possible.

I have argued that *any* variant of preference-based, 'wholly subjective value' approach is flawed. We need to accept objective, intrinsic values and a holistic, integrative approach instead, in order to reach morally defensible public policy decisions.

AN ALTERNATIVE TO CONTINGENT VALUATION?

Following upon the argument of *The Economy of The Earth* (Sagoff, 1988), one could argue that contingent valuation may indeed propose the worse available choice, as it represents the voice of consumers' preferences. Still, following Sagoff, one might want to contrast this with the possibility of eliciting 'citizens' values' instead. But Sagoff himself shows how both consumer and citizen somehow coexist in most of us. If that is true, it is unclear why the proponents of CV would be able to elicit in some magic way the latter (citizens' values), without succumbing to the former (consumers' preferences). And even if this miracle came to pass, I have shown that even that success may fall short of the mark.

The goal of public policy must be understood as acceptable and fair regulation that protects the rights of citizens from immediate or long-term harm, while ensuring that no serious harm is vested upon other populations, geographically (and maybe even temporally) removed from the community at issue. For this goal to be met, community processes must respect and protect not only human, but also non-human life on earth, from both a moral point of view and a prudential one. This is true whether or not they are aware of the issues or even interested in them.

For example, community regulations almost everywhere now include the prohibition of smoking in most public places, and the use of safety belts in automobiles. These regulations protect public health and welfare whether or not they reflect citizens' preferences or community values. One could imagine imposing newly conceived gun restrictions on citizens in areas of the United States where they would represent neither consumers' preferences nor community values. Yet, following the terrifying shooting events at many US schools surely such legislation could (and should) be endorsed as protecting the public good.

Indeed, these difficulties are not limited to CV. But while it is true that present liberal democratic institutions are prey to similar problems, CV magnifies the problems at hand as it further distorts the issues under consideration. Various departments, say an environmental justice office, a public health board and the like, could interject some restraint or alter policies when the options supported locally fail to protect the public good. What is needed is more informed, scientific

and concerned information, not less, although some stakeholders' input is clearly desirable.

What can be offered as an alternative to CV for decisions involving risky choices? The presence of an office of public health, an office of environmental justice, one of conservation biology and a support of ecosystem health protection, might form a basic integrated forum for public policy. In addition, the *absence* of input from the economically interested parties, including their so-called 'independent' impact studies, might represent a first step to a truly representative round-table.

Most important of all is the realisation that, once we understand how flawed the presently accepted practices are, and why, only then we will be able to move forward and strive in the quest for innovative practices capable of producing truly equitable and safe results.

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